



## 9.20 Borough of Mendham

This section presents the jurisdictional annex for the Borough of Mendham.

### 9.20.1 Hazard Mitigation Plan Point of Contact

The following individuals have been identified as the hazard mitigation plan's primary and alternate points of contact.

Primary Point of Contact	Alternate Point of Contact
Nick Witczak, OEM Coordinator 2 West Main Street, Mendham 973-879-3105 <a href="mailto:MendhamBoroughOEM@gmail.com">MendhamBoroughOEM@gmail.com</a>	Rick Merkt, Borough Administrator 2 West Main Street, Mendham 973-543-7152 <a href="mailto:Rmerkt@mendhamnj.org">Rmerkt@mendhamnj.org</a>

### 9.20.2 Municipal Profile

Mendham Borough is located in suburban Morris County, New Jersey and is located 40 miles west of mid-Borough Manhattan. Incorporated as a borough by an Act of the New Jersey Legislature on May 15, 1906, Mendham Borough's population is 5,097

Known for its rich historic charm and quaintness, Mendham Borough is known for noted landmarks such as the Phoenix House which serves as the Borough's Municipal Building and the Black Horse Inn.

The governing body of Mendham Borough consists of a Mayor and a Borough Council comprising of six council members who are all elected at large. The Mayor is elected directly by the voters for a four-year term and is considered the head of the municipal government. The Borough Council is considered the legislative body of the municipality and confirms the Mayor's appointments.

Public school students in grades K-8 attend the Mendham Borough School system (Hilltop Elementary is K-4 and Mountain View Middle School serves grades 5-8). High school students attend West Morris Mendham High School. Mendham Borough is also home to Saint Joseph School and Assumption College for Sisters. <http://www.mendhamnj.org>

The Borough is bordered by Mendham Township to the north, east and west; Bernardsville Borough (Somerset County) forms the southern border. According to the U.S. Census, the Borough has a total area of 6.00 square miles, of which 5.95 square miles is land and 0.05 square miles is water.

Mendham Borough lies in the headwaters of three (3) major river systems: the Whippany River, North Branch of the Raritan River, and the Passaic River. (Comprehensive Plan)

### Growth/Development Trends

The Borough of Mendham did not note any recent residential/commercial development since 2010 or any major residential or commercial development, or major infrastructure development planned for the next five years in the municipality.

### 9.20.3 Natural Hazard Event History Specific to the Municipality

Morris County has a history of natural and non-natural hazard events as detailed in Volume I, Section 5.0 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. For the purpose of this plan update, events that



have occurred in the County from 2008 to present were summarized to indicate the range and impact of hazard events in the community. Information regarding specific damages is included, if available, based on reference material or local sources. This information is presented in the table below. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

**Table 9.20-1. Hazard Event History**

Dates of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
August 26 – September 5, 2011	Hurricane Irene	EM-3332 DR-4021	Yes Yes	Evacuation of one family to local shelter due to flooding. Power outages less than 2 days Borough-wide. Road closures due to flooding. Public Assistance (PA) requested.
October 29, 2011	Severe Storm	DR-4048	Yes	Power outages for 2 days+ Borough wide. PA requested.
October 26 – November 8, 2012	Hurricane Sandy	EM-3354 DR-4086	Yes Yes	Some residents sheltered for up to 3 days. Widespread power outages affecting 5,000 residents for up to 7 days. PA requested.

### 9.20.4 Hazard Vulnerabilities and Ranking

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the hazard vulnerabilities and their ranking in the Borough of Mendham. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.

#### Hazard Risk/Vulnerability Risk Ranking

The table below summarizes the hazard risk/vulnerability rankings of potential hazards for the Borough of Mendham.

**Table 9.20-2. Hazard Risk/Vulnerability Risk Ranking**

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard <sup>a, c</sup>	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking <sup>b</sup>
Drought	Damage estimate not available	Frequent	27	Medium
Dam Failure	Damage estimate not available	Rare	6	Low
Earthquake	500-year MRP: \$981,822 2,500-year MRP: \$20,520,671	Occasional	24	Medium
Extreme Temperature	Damage estimate not available	Frequent	27	Medium
Flood	1% Annual Chance: \$306,511	Occasional	12	Low
Geological Hazards	Exposed to Class A and Class B: \$9,256,823	Occasional	12	Low
Severe Storm	100-Year MRP: \$1,401,465 500-year MRP: \$10,380,306 Annualized: \$74,180	Frequent	48	High
Winter Storm	1% GBS: \$19,382,341 5% GBS: \$96,911,703	Frequent	54	High
Wildfire	Estimated Value Exposed to Extreme, Very High and High: \$4,297,218	Rare	6	Low

Notes:



- a. Building damage ratio estimates based on FEMA 386-2 (August 2001)
- b. The valuation of general building stock and loss estimates was based on custom inventory for the municipality.  
 High = Total hazard priority risk ranking score of 31 and above  
 Medium = Total hazard priority risk ranking of 20-30+  
 Low = Total hazard risk ranking below 20
- c. Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the value of contents.
- d. Loss estimates for the flood and earthquake hazards represent both structure and contents.
- e. The HAZUS-MH earthquake model results are reported by Census Tract.

### National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Borough of Mendham.

**Table 9.20-3. NFIP Summary**

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 100-year Boundary (3)
Borough of Mendham	13	1	\$31,376.78	0	0	1

Source: FEMA Region 2, 2014

(1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA Region 2, and are current as of 9/30/2014. Please note the total number of repetitive loss properties includes the severe repetitive loss properties. The number of claims represents claims closed by 9/30/14.

(2) Total building and content losses from the claims file provided by FEMA Region 2.

(3) The policies inside and outside of the flood zones is based on the latitude and longitude provided by FEMA Region 2 in the policy file.

Notes: FEMA noted that where there is more than one entry for a property, there may be more than one policy in force or more than one GIS possibility.

A zero percentage denotes less than 1/100th percentage and not zero damages or vulnerability as may be the case.

Number of policies and claims and claims total exclude properties located outside County boundary, based on provided latitude and longitude.

### Critical Facilities

There are no critical facilities in the Borough that are located within the FEMA 1% or 0.2% flood hazard areas.

### Other Vulnerabilities Identified

The Borough identified the following vulnerabilities within the community:

- Bauer Building – Basement which once housed Borough records flooded in the 1980's.

## 9.20.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community classification
- National Flood Insurance Program
- Integration of Mitigation Planning into Existing and Future Planning Mechanisms

### Planning and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Borough of Mendham.



**Table 9.20-4. Planning and Regulatory Tools**

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No)	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
<b>Planning Capability</b>				
Master Plan	Yes	Local	Planning Bd.	2006 with updates to 2011
Capital Improvements Plan	Yes	Local	Admin. – Borough Council Finance Committee	As determined by Borough Council.
Floodplain Management / Basin Plan	No			
Stormwater Management Plan	Yes	Local	Sewer Dept.	The SWMP, required by NJAC 7:14A-24, was prepared by our Borough Engineer and adopted in March, 2005 as an addendum to the Master Plan.
Open Space Plan	Yes	Local	Open Space Committee	Prepared by Open Space Committee and adopted by Planning Board in 2003.
Stream Corridor Management Plan	No			
Watershed Management or Protection Plan	No			
Economic Development Plan	Yes	Local	Admin. – Borough Council Finance Committee	
Comprehensive Emergency Management Plan	Yes	Local	OEM	Borough OEM
Emergency Response Plan	Yes	Local	OEM	Borough OEM
Post-Disaster Recovery Plan	No			
Transportation Plan	No			
Strategic Recovery Planning Report	No			
Other Plans:	No			
<b>Regulatory Capability</b>				
Building Code	Yes	State & Local	Building Dept.	State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.) Chapter 90
Zoning Ordinance	Yes	Local	Land Use - Board of Adjustment; Planning Board	Chapter 215
Subdivision Ordinance	Yes	Local	Land Use - Board of Adjustment; Planning Board	Chapter 195
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Contract Engineer	Chapter 110
NFIP: Cumulative Substantial	No	Local		



Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No)	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Damages				
NFIP: Freeboard	Yes	State, Local	Contract Engineer	Chapter 110
Growth Management Ordinances	Yes	Local	Land Use - Board of Adjustment; Planning Board	
Site Plan Review Requirements	Yes	Local	Land Use - Board of Adjustment; Planning Board	
Stormwater Management Ordinance	Yes	Local	DPW	
Municipal Separate Storm Sewer System (MS4)	Yes	Local	Sewer	
Natural Hazard Ordinance	No			
Post-Disaster Recovery Ordinance	No			
Real Estate Disclosure Requirement	Yes	State	Division of Consumer Affairs	N.J.A.C. 13:45A-29.1
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	No			

### Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Borough of Mendham.

**Table 9.20-5. Administrative and Technical Capabilities**

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Planning Board, Board of Adjustment
Mitigation Planning Committee	No	
Environmental Board/Commission	Yes	Committee
Open Space Board/Committee	Yes	Committee
Economic Development Commission/Committee	No	
Maintenance Programs to Reduce Risk	Yes	Administrator
Mutual Aid Agreements	Yes	Departments
<b>Technical/Staffing Capability</b>		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Stormwater Management Coordinator: Paul Ferriero, PE, PP
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Contract engineer
Planners or engineers with an understanding of natural hazards	Yes	Contract engineer



Resources	Is this in place? (Yes or No)	Department/ Agency/Position
NFIP Floodplain Administrator	Yes	Per Chapter 110-14, Borough Zoning Officer (currently managed by Borough Engineer)
Surveyor(s)	Yes	Contract engineer
Personnel skilled or trained in GIS and/or Hazus-MH applications	No	
Scientist familiar with natural hazards	No	
Emergency Manager	Yes	OEM
Grant Writer(s)	Yes	Administrator
Staff with expertise or training in benefit/cost analysis	Yes	Financial Officer
Professionals trained in conducting damage assessments	Yes	Building Official

### Fiscal Capability

The table below summarizes financial resources available to the Borough of Mendham.

**Table 9.20-6. Fiscal Capabilities**

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Community Development Block Grants (CDBG, CDBG-DR)	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Water, Sewer
Impact Fees for homebuyers or developers of new development/homes	No
Stormwater Utility Fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Available
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other Federal or State Funding Programs	Yes
Open Space Acquisition Funding Programs	Yes - Available through State and County (Morris County Flood Mitigation Program [acquisitions])
Other	

### Community Classifications

The table below summarizes classifications for community program available to the Borough of Mendham.

**Table 9.20-7. Community Classifications**

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	N/A	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	TBD	TBD	TBD
Public Protection (ISO Fire Protection Classes 1	Yes	5	TBD



Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
to 10)			
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A
Disaster/Safety Programs in/for Schools	Yes		
Organizations with Mitigation Focus (advocacy group, non-government)	No	N/A	N/A
Public Education Program/Outreach (through website, social media)	Yes	N/A	N/A
Public-Private Partnerships	Yes		

N/A = Not applicable. NP = Not participating. - = Unavailable. TBD = To be determined.

The classifications listed above relate to the community's ability to provide effective services to lessen its vulnerability to the hazards identified. These classifications can be viewed as a gauge of the community's capabilities in all phases of emergency management (preparedness, response, recovery and mitigation) and are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS class applies to flood insurance while the BCEGS and Public Protection classifications apply to standard property insurance. CRS classifications range on a scale of 1 to 10 with class 1 being the best possible classification, and class 10 representing no classification benefit. Firewise classifications include a higher classification when the subject property is located beyond 1000 feet of a creditable fire hydrant and is within 5 road miles of a recognized Fire Station.

Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule
- The ISO Mitigation online ISO's Public Protection website at <http://www.isomitigation.com/ppc/0000/ppc0001.html>
- The National Weather Service Storm Ready website at <http://www.weather.gov/stormready/howto.htm>
- The National Firewise Communities website at <http://firewise.org/>

### Self-Assessment of Capability

The table below provides an approximate measure of Mendham's capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

**Table 9.20-8. Self-Assessment Capability for the Municipality**

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)*	Moderate	High
Planning and Regulatory Capability		X	
Administrative and Technical Capability	Limited personnel		
Fiscal Capability	Limited tax base		
Community Political Capability		X	
Community Resiliency Capability	Limited local resources		





Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)*	Moderate	High
Planning and Regulatory Capability		X	
Capability to Integrate Mitigation into Municipal Processes and Activities.		X	

### National Flood Insurance Program

#### NFIP Floodplain Administrator

Paul Ferriero, PP, PP - Borough Engineer

#### Flood Vulnerability Summary

As of 2/28/2015 there are 13 NFIP policies in force within the community, insuring \$ 3,432,000 of property with total annual insurance premiums of \$ 5,134. Since 1978, 1 NFIP claims have been paid totaling \$ 31,377. As of 9/30/2014, there are no Repetitive Loss or Severe Repetitive Loss properties in the community. The Borough considers their overall flood risk to be low relative to other Morris County communities.

#### Resources

The Borough Engineer is the designated floodplain administrator, who makes available floodplain maps, provides information on floodplain building requirements, issues floodplain development permits, performs permit review and record-keeping. Land use planning and compliance with the provisions of the local Flood Damage Prevention Ordinance (Chapter 110 of the local code) is supported by the Planning Board and Board of Adjustment. The available resources are believed to be appropriate and sufficient to effectively manage the limited flood risk within the community.

#### Compliance History

The community is currently in good standing in the NFIP and has no outstanding compliance issues. The current NFIP Floodplain Administrator has no knowledge of when the last CAV was performed. The municipality sees no specific need for a CAV at this time.

#### Regulatory

The community joined the NFIP in 11/4/2008. The current effective NFIP rate maps for the community are dated 11/4/1992. The Borough of Mendham does not participate in the Community Rating System (CRS) program.

### Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, each community was surveyed to obtain a better understanding of their community's progress in plan integration. A summary is provided below. In addition, the community identified specific integration activities that will be incorporated into municipal procedures.

#### Planning

The Borough's site plan review process includes consideration of natural hazard risk (e.g. floodplains, steep slopes, etc.). Further, through the site plan review and development permitting process, the Borough requires





developers to take additional actions to manage natural hazard risk (e.g. undergrounding utilities, stormwater detention, creating easements in areas/zones of natural hazard risk).

The Borough prepared an Environmental Resources Inventory (ERI) as part of the Comprehensive/Master Plan process, which included geology, topography, surface water, soils, ground water hydrology and resources, floodplains, wetlands, vegetation, wildlife, and open space. This document and the other background studies provide a basis for decisions by the Planning Board, Board of Adjustment, Environmental Commission, and other interested groups involved with land development in the Borough.

**Wetlands:** Wetlands serve many important functions. They provide flood storage and stream flow attenuation during wet periods. Mendham Borough should continue to obtain conservation easements on all wetlands and transition areas when land is subdivided. All conservation easement boundaries on newly approved sites should be recorded on the deed, delineated with permanent markers, and a system for monitoring conservation easements should be established.

### Operational and Administration

The Borough has a Local Emergency Preparedness Committee (LEPC) that supports natural hazard risk preparedness, response and mitigation.

### Fiscal

The Borough has a Capital Improvements Budget that includes funding for projects to harden critical facilities and infrastructure.

### Education and Outreach

The Borough has an active public education and outreach program (municipal website, social media, e-mail lists) that includes information about personal preparedness and mitigation.

## 9.20.6 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritization.

### Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2010 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under 'Capability Assessment' presented previously in this annex.

**Table 9.20-9. Past Mitigation Initiative Status**

Description	Status	Review Comments
<b>Mendham Boro 1:</b> Backup power (generator) for DPW building.	Complete	Add a Backup power generator for Mountain View Middle School for Sheltering.
<b>Mendham Boro 2:</b> Storm water runoff upgrades Prospect Street and Hilltop Road.	Complete	
<b>Mendham Boro 3:</b> Building code update.	Complete	Further updates will be conducted if required by state codes or national standards.



Description	Status	Review Comments
<b>Mendham Boro 4:</b> Storm water runoff control system for Mountainside Road (Valley Way).	Complete	
<b>Mendham Boro 5:</b> Develop all-hazards public education and outreach program for hazard mitigation and preparedness.	In progress – 50% complete.	Include in updated strategy. Project is ongoing, working with local media and technology resources.

### Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy

The municipality has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2010 Plan:

- None identified at this time.

### Proposed Hazard Mitigation Initiatives for the Plan Update

The Borough of Mendham participated in a mitigation action workshop in January 2015 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 ‘Selecting Appropriate Mitigation Measures for Floodprone Structures’ (March 2007) and FEMA ‘Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards’ (January 2013).

Table 9.20-10 summarizes the comprehensive-range of specific mitigation initiatives the Borough of Mendham would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing your actions as ‘High’, ‘Medium’, or ‘Low.’ The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.20-11 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.20-10. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
Mendham Boro 1	Complete upgrades to Mountain Valley Park dam (Class I), including upgrading the spillway.	Existing	Dam Failure; Flood; Severe Storm; Earthquake	3, 4	Borough Engineer	High – Reduced risk of dam failure; life safety	High – est. \$450k	Borough Capital Budget; Open Space Funding; Grants as available	Construction est. 2016; Completion est. 2020	High	SIP	PP
Mendham Boro 2	Install Backup Power at the following critical facilities in the Borough: <ul style="list-style-type: none"> <li>Borough Hall - Supports critical and essential services</li> <li>Mountain View Middle School - Supports sheltering needs.</li> <li>Garabrant Community Center - Serves as a comfort station.</li> <li>Mendham Area Senior Housing – Supporting vulnerable citizens.</li> </ul>											
	See above.	Existing	Severe Storm; Severe Winter Storm; Extreme Temperatures	3, 4	Borough OEM and Board of Education	High	Medium (per location); Middle School est. \$60K	Federal Grants (e.g. FEMA HMA) with Local Match	Short-term depending on funding	Medium	SIP	PP
Mendham Boro 3 (former Mendham Boro 5)	Develop all-hazards public education and outreach program for hazard mitigation and preparedness. Project is ongoing (50% complete), working with local media and technology resources, specifically utilizing social media and Alert Mendham Borough instant alert program.											
	See above.	N/A	All Hazards	1, 2	Borough Administrator	Improved public preparedness and personal mitigation	Low	Borough operating budget	To be completed in 2015	High	EAP	PI, ES

Notes:

Not all acronyms and abbreviations defined below are included in the table.

\*Does this mitigation initiative reduce the effects of hazards on new and/or existing buildings and/or infrastructure? Not applicable (N/A) is inserted if this does not apply.

Acronyms and Abbreviations:

CAV	Community Assistance Visit
CRS	Community Rating System
DPW	Department of Public Works
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator
HMA	Hazard Mitigation Assistance
N/A	Not applicable
NFIP	National Flood Insurance Program
NJDEP	New Jersey Department of Environmental Protection

Potential FEMA HMA Funding Sources:

FMA	Flood Mitigation Assistance Grant Program
HMGP	Hazard Mitigation Grant Program
PDM	Pre-Disaster Mitigation Grant Program
RFC	Repetitive Flood Claims Grant Program (discontinued 2015)
SRL	Severe Repetitive Loss Grant Program (discontinued 2015)

Timeline:

Short	1 to 5 years
Long Term	5 years or greater
OG	On-going program
DOF	Depending on funding





Acronyms and Abbreviations:

NJOEM New Jersey Office of Emergency Management  
OEM Office of Emergency Management

Potential FEMA HMA Funding Sources:

Timeline:

Costs:

Where actual project costs have been reasonably estimated:

Low < \$10,000  
Medium \$10,000 to \$100,000  
High > \$100,000

Where actual project costs cannot reasonably be established at this time:

Low Possible to fund under existing budget. Project is part of, or can be part of an existing on-going program.  
Medium Could budget for under existing work plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.  
High Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.

Benefits:

Where possible, an estimate of project benefits (per FEMA's benefit calculation methodology) has been evaluated against the project costs, and is presented as:

Low= < \$10,000  
Medium \$10,000 to \$100,000  
High > \$100,000

Where numerical project benefits cannot reasonably be established at this time:

Low Long-term benefits of the project are difficult to quantify in the short term.  
Medium Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.  
High Project will have an immediate impact on the reduction of risk exposure to life and property.

Mitigation Category:

- Local Plans and Regulations (LPR) – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)- These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP) – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP) – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities

CRS Category:

- Preventative Measures (PR) - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP) - These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- Public Information (PI) - Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- Natural Resource Protection (NR) - Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- Structural Flood Control Projects (SP) - Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- Emergency Services (ES) - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities



Table 9.20-11. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
Mendham Boro 1	Complete upgrades to Mountain Valley Park dam	1	1	1	1	1	1	-1	0	1	1	1	1	1	1	11	High
Mendham Boro 2	Backup Power for Critical Facilities	1	0	1	1	1	1	0	0	1	0	1	1	1	1	10	Medium
Mendham Boro 3 (former Mendham Boro 5)	All-Hazards Public Education and Outreach Program	1	1	1	1	1	1	1	0	1	1	1	1	1	1	13	High

Note: Refer to Section 6 which contains the guidance on conducting the prioritization of mitigation actions.



### **9.20.7 Future Needs To Better Understand Risk/Vulnerability**

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None at this time.

### **9.20.8 Hazard Area Extent and Location**

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Hazard area extent and location maps have been generated for the Borough of Mendham that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Borough of Mendham has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

### **9.20.9 Additional Comments**

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None at this time.





Figure 9.20-1. Borough of Mendham Hazard Area Extent and Location Map 1

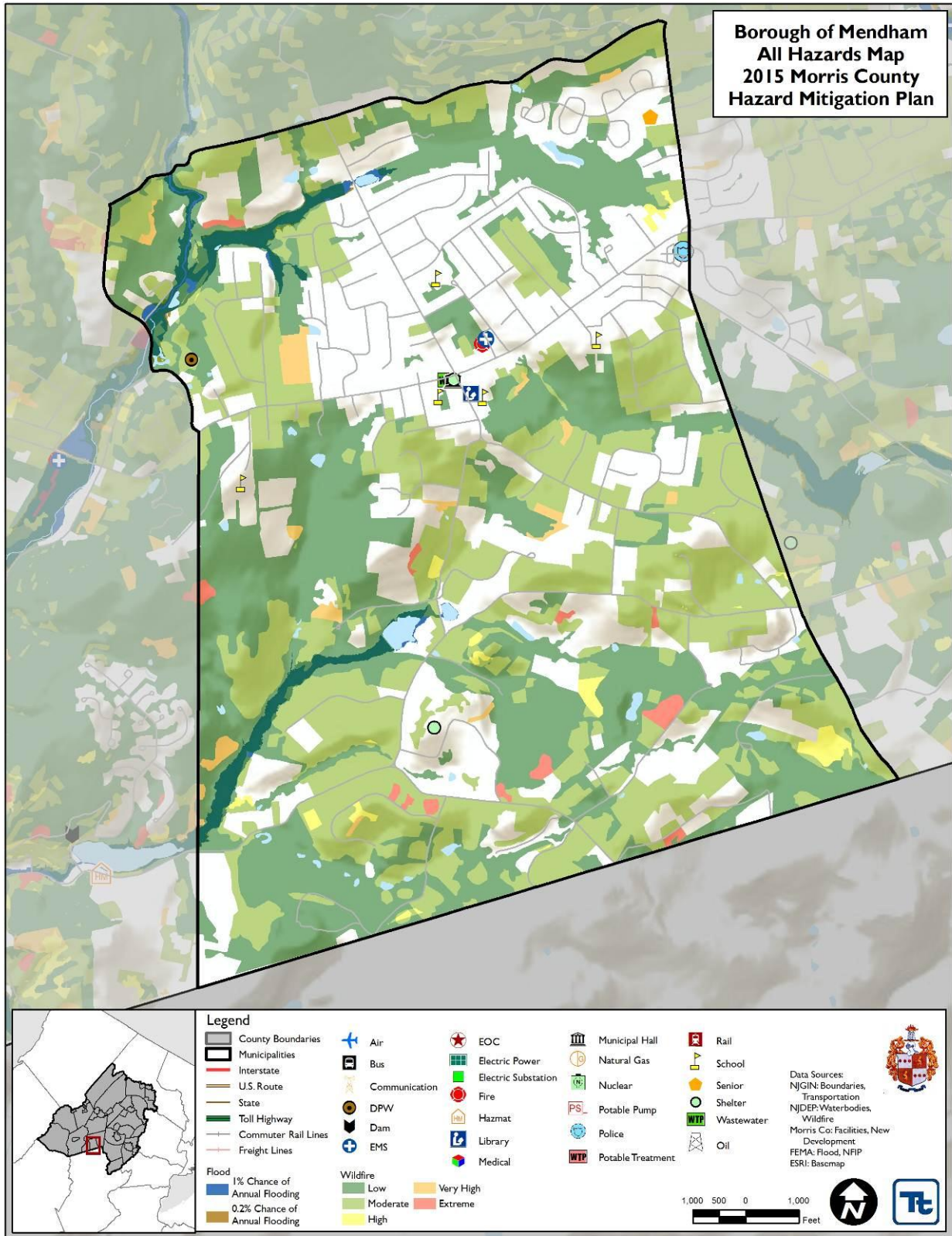
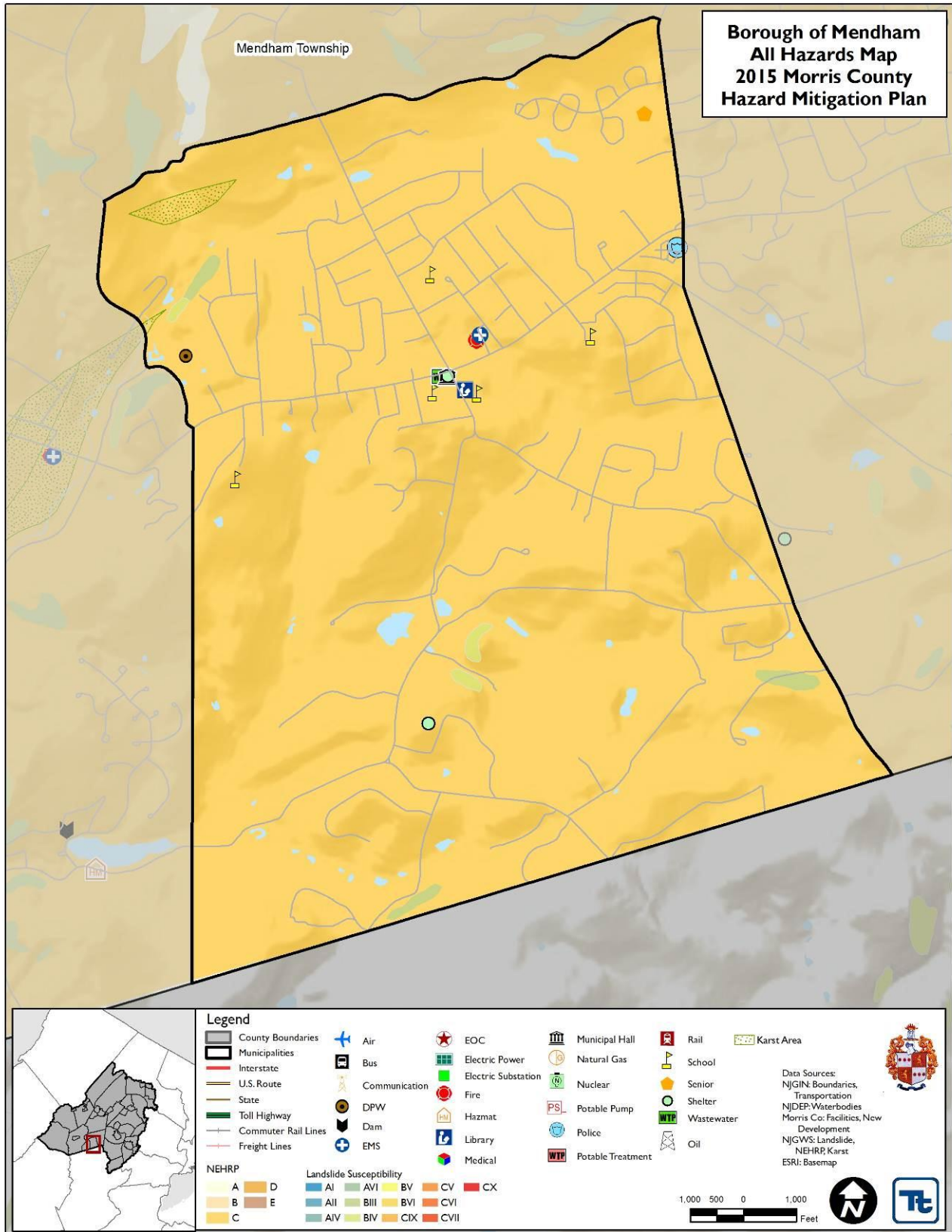






Figure 9.20-2. Borough of Mendham Hazard Area Extent and Location Map 2





**Name of Jurisdiction:** Mendham Borough  
**Action Number:** Mendham Boro 1  
**Mitigation Action/Initiative:** Mountain Valley Park Dam Upgrades

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Dam Failure; Flood; Severe Storm; Earthquake
<b>Specific problem being mitigated:</b>	The Mountain Valley Park Dam is a Class I dam. Compliance inspections have identified the need for upgrades to the dam, including an upgraded spillway. Failure of this dam would result in severe damage to structures and infrastructure, and poses a high risk to life safety.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	Taking no action is not an alternative due to life safety concerns and regulatory requirements. Abandonment of the reservoir was not a viable alternative as this provides a vital water supply.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Complete upgrades to Mountain Valley Park dam (Class I), including upgrading the spillway.
<b>Action/Project Category</b>	SIP
<b>Goals/Objectives Met</b>	3,4
<b>Applies to existing, future, or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	High – Reduced risk of dam failure; life safety
<b>Estimated Cost</b>	High – est. \$450k
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible Organization</b>	Borough Engineer
<b>Local Planning Mechanism</b>	Dam Emergency Action Plan; Comprehensive Emergency Management Plan; Local Capital Budget
<b>Potential Funding Sources</b>	Borough Capital Budget; Open Space Funding; Grants as available
<b>Timeline for Completion</b>	Ongoing; Construction est. 2016; Completion est. 2020
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: Progress on Action/Project:

\* Refer to results of Prioritization (page 2)



**Action Number:** Mendham Boro 1  
**Mitigation Action/Initiative:** Mountain Valley Park Dam Upgrades

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	A Class 1 dam, which poses significant risk to property damage and life safety.
Property Protection	1	A Class 1 dam, which poses significant risk to property damage and life safety.
Cost-Effectiveness	1	Potential losses (benefits) are very.
Technical	1	Project can be implemented with existing municipal resources
Political	1	Project is supported by the government and community.
Legal	1	Borough owns the dam and has full jurisdiction to implement the project
Fiscal	-1	Project is large cost to the community.
Environmental	0	No environmental impediments to implementation
Social	1	Would benefit all populations equally
Administrative	1	Project implementation can be administered with existing resources
Multi-Hazard	1	
Timeline	1	In progress
Agency Champion	1	Borough engineer
Other Community Objectives	1	Supports emergency management and regulatory compliance
<b>Total</b>	11	
<b>Priority (High/Med/Low)</b>	High	



**Name of Jurisdiction:** Mendham Borough  
**Action Number:** Mendham Boro 2  
**Mitigation Action/Initiative:** Backup Power for Critical Facilities

Assessing the Risk	
<b>Hazard(s) addressed:</b>	All hazards resulting in power interruption (e.g. Severe Storm, Severe Winter Storm – as exacerbated by Climate Change); Extreme Temperatures
<b>Specific problem being mitigated:</b>	The following critical and essential facilities in the Borough are vulnerable to power outages resulting in the loss of critical and essential services. <ul style="list-style-type: none"><li>• Borough Hall - Supports critical and essential services</li><li>• Mountain View Middle School - Supports sheltering needs</li><li>• Garabrant Community Center - Serves as a comfort station</li><li>• Mendham Area Senior Housing – Supporting vulnerable citizens.</li></ul>
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	With the exception of taking no action and allowing these vulnerabilities to persist, no practical, feasible or cost-effective alternatives to the installation of backup power (natural gas) were identified.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Install backup power at these three critical and essential facilities.
<b>Action/Project Category</b>	SIP
<b>Goals/Objectives Met</b>	3, 4
<b>Applies to existing, future, or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	High – Reduced vulnerability of critical facility and critical services to power interruptions; public health and life safety
<b>Estimated Cost</b>	\$60,000 (Middle School)
<b>Priority*</b>	Medium
Plan for Implementation	
<b>Responsible Organization</b>	Mendham Borough OEM working with Board of Education
<b>Local Planning Mechanism</b>	Comprehensive Emergency Management Plan (incl. Sheltering Plan); School District and Local Capital Budgets
<b>Potential Funding Sources</b>	Federal Mitigation Grant Funding; Borough and District for Local Match
<b>Timeline for Completion</b>	Short-term depending on funding
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: Progress on Action/Project:

\* Refer to results of Prioritization (page 2)



**Action Number:** Mendham Boro 2  
**Mitigation Action/Initiative:** Backup Power for Critical Facilities

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Addresses public health/life safety, including vulnerable populations. Would support response and recovery operations.
Property Protection	0	
Cost-Effectiveness	1	Highly cost-effective
Technical	1	Projects can be implemented with existing municipal resources
Political	1	Project is supported politically and by community
Legal	1	Borough and School District have full jurisdiction to implement project
Fiscal	0	Would require grant funding to support implementation
Environmental	0	No environmental impediments to implementation
Social	1	Would benefit all populations equally
Administrative	0	Grant and project implementation could be administered with existing resources
Multi-Hazard	1	Address all hazards that could result in power outages
Timeline	1	Can be readily implemented once funding is secured
Agency Champion	1	
Other Community Objectives	1	Would support community resilience and general emergency management
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	Medium	